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China: Real Trends in Trade with Non-Communist Countries Since 1970

A Research Paper

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October 1977

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PREFACE

To determine real trends in China's foreign trade since 1970, the effects of world inflation and of the devaluation of the US dollar must be factored out of current value data. This research aid presents estimates of China's trade with the non-Communist countries in current and constant US dollars for the years 1970-75.

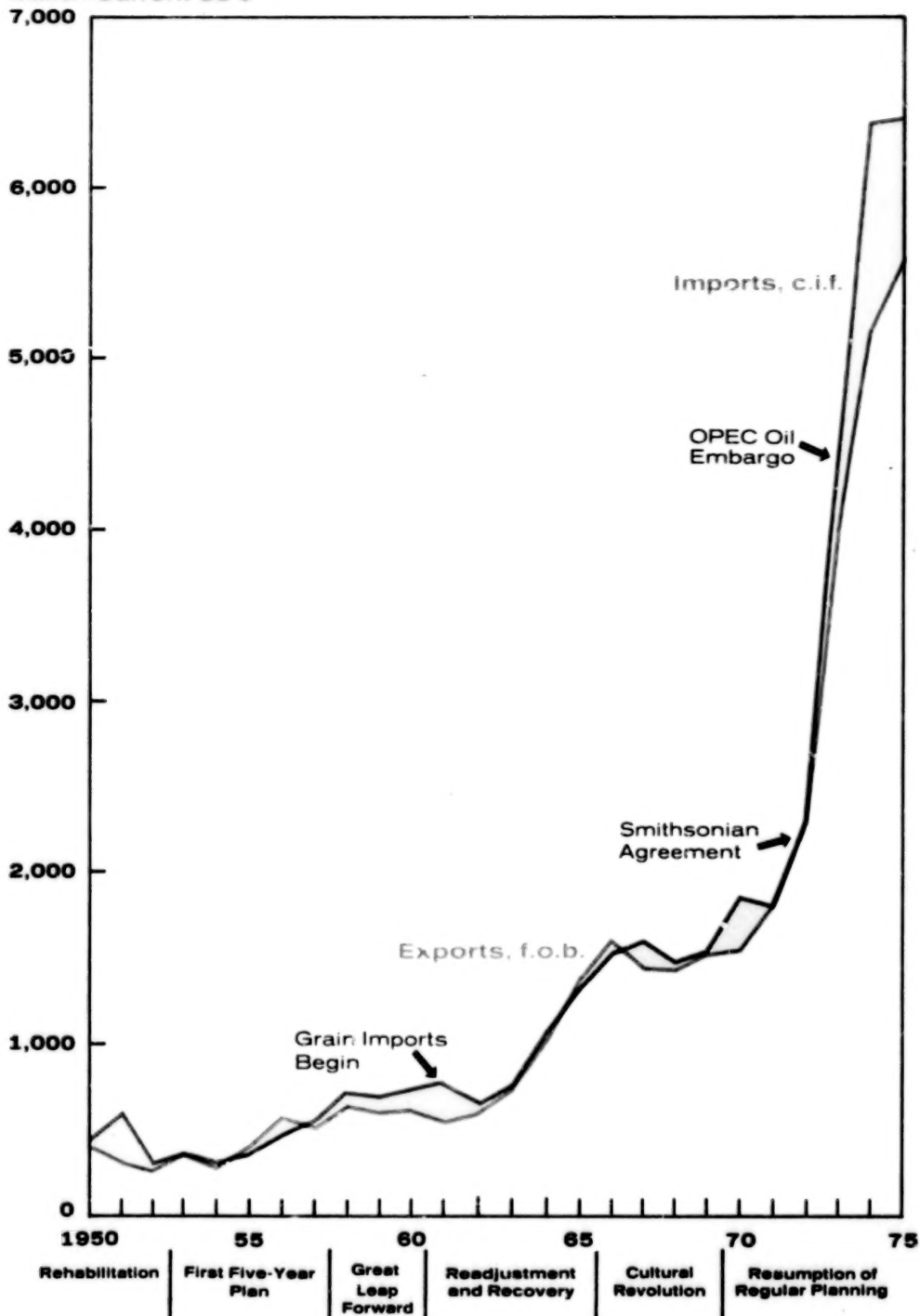
An upward bias also exists in the current value data for China's trade with Communist countries. The principal cause of this bias was introduced when barter prices were revised to world market levels, after years of adherence to "historical" prices. The devaluation of the dollar vis-a-vis the ruble and East European currencies has also introduced inflation into the current dollar data. Deflation of China's trade with the Communist countries is a separate study, however, requiring different methods and more information than is currently available.

Section I provides a brief overview of historical trends in the current dollar value of China's trade with non-Communist countries. Section II describes and analyzes aggregate price trends for PRC exports and imports. Section III deflates trade into constant US dollars and analyzes the aggregate quantity—or real—trends. Derivation of the price indexes for China's exports and imports is explained in the Appendixes.

Figure 1

Trade with Non-Communist Countries

Million Current US \$



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China: Real Trends in Trade With Non-Communist Countries Since 1970

Central Intelligence Agency
National Foreign Assessment Center
October 1977

I. Historical Trends in the Dollar Value of Trade

Since the founding of the People's Republic, China's trade with the non-Communist countries has advanced in fits and starts—the result of a complex interaction of foreign and domestic economic and political factors (see figure 1). Until recently, exports and imports were basically in balance.

Between 1950 and 1959 China's total trade—Communist and non-Communist—more than tripled, outstripping the growth of the domestic economy. Because of Mao's "lean to one side" foreign policy and the Korean war trade restrictions imposed by the Western nations, most of the growth in trade was with the Soviet Bloc—non-Communist countries accounted for only one-third of the total.

Trade slumped in the 1960s; not until 1970 did the total again reach the peak level of 1959. Nevertheless, the non-Communist portion increased sharply. The Sino-Soviet rift—together with three disastrous harvests following the Great Leap Forward—encouraged China to diversify trade. By 1966, China had shifted three-quarters of its trade to the West. During the Cultural Revolution, however, China's attentions turned inward, and trade stagnated.

The resumption of regular planning during the Fourth Five-Year Plan brought a new wave of trade. From 1971 to 1975, the dollar value of China's trade tripled; and the non-Communist share of China's trade rose to nearly 85 percent—by far the largest share of any Communist country's trade. At the same time, flexible exchange rates and unstable world prices created a new element of uncertainty for China's central planners. No longer could the Chinese plan for balanced trade simply by adjusting the targeted quantities of exports or imports within a framework of known world prices. After 1971, total receipts and expenditures could be determined with certainty only after contracts were in hand. In 1974, China registered its first major trade deficit with the West.

Through the 1950s and 1960s, dollar values probably provided a fairly accurate measure of the real growth in China's trade with the West. World inflation amounted to only 2 or 3 percent per year, and foreign currencies were fixed against the dollar with only occasional changes. Since the

Smithsonian Agreement in December 1971 and the OPEC oil embargo in October 1973, the dollar has declined in value, and world prices have jumped sharply. As a result, dollar values have distorted the real trends in China's trade. To understand recent developments in China's trade, it has become necessary, therefore, to reexamine the period since 1970, sorting out both price and quantity trends.

II. Aggregate Price Trends

Table 1 presents aggregate price indexes for China's exports and imports in terms of US dollars, using 1970 as the base for comparison. In general, China's export prices varied little from 1970 to 1971, but reflect the full extent of the devaluation of the dollar in 1972. Big increases occurred in 1973 and 1974, followed by a slight decline during the world recession in 1975. Import prices fell in 1971 and remained below the 1970 level in 1972 despite the dollar devaluation, but picked up in 1973 and skyrocketed in 1974, before leveling off in 1975.

A. Export Prices

Exports from China's extractive sector exhibited greater price fluctuations than exports from either the agricultural or manufacturing sectors (see figure 2). This sector is the smallest and, therefore, the most affected by price movements of a few commodities. The decline in 1971 and 1972 was due largely to falling prices for antimony and tungsten ores; prices for fluorspar, natural graphite, common salt, and many other crude minerals actually increased. From 1973 on, this sector, of course, was dominated by the meteoric rise in crude oil prices.

Export prices for products of the agricultural and manufacturing sectors followed almost identical trends, except for 1973, when rice and soybean prices jumped sharply. Overall, prices in these sectors declined about equally in 1975, although the recession hit certain groups of commodities more than others. Average prices, for example, for China's exports of natural textile fibers (mostly silk, angora, and cashmere) fell by almost a third from 1974 levels, while prices for textile fabrics (mostly cottons) fell by only 20 percent and clothing prices dropped by less than 15 percent.

Export prices for consumer goods initially ran ahead of foodstuffs and industrial supplies, but then fell behind in 1973. Crude oil buoyed up the average for industrial supplies in 1974 and 1975; with oil excluded, however, this sector fared no better than foodstuffs or consumer goods.

Compared with other end-use categories, export prices for capital goods diverged most from the general trend. Prices were virtually constant from 1970 to 1972 and only rose slowly thereafter. Some of these products apparently were offered at "friendship prices" under aid agreements—exports of railroad equipment to Tanzania, for instance. In part, however, the slow increase in prices must reflect the difficulties these Chinese goods face in competing with machinery and equipment produced in the West.

Table 1

Aggregate Dollar Price and Terms of Trade Indexes
for Trade With Non-Communist Countries

1970=100

	1970	1971	1972	1973	1974	1975
Export Price Indexes ¹						
All exports	100.0	102.0	110.6	152.0	209.4	205.3
Sectors of origin						
Agriculture	100.0	101.4	111.7	161.3	199.8	185.8
Extraction	100.0	85.8	88.6	113.2	371.2	453.3
Manufacturing	100.0	104.1	111.0	147.6	198.7	185.5
End use						
Foodstuffs	100.0	103.0	115.3	161.7	206.5	193.8
Industrial supplies	100.0	100.2	106.0	152.9	228.4	229.3
Capital goods	100.0	98.8	98.6	115.4	128.9	156.5
Consumer goods	100.0	105.9	116.9	144.6	191.4	186.9
Import Price Indexes ²						
All imports	100.0	92.4	94.6	121.5	183.8	190.6
Sectors of origin						
Agriculture	100.0	111.9	123.6	159.1	284.5	280.6
Extraction	100.0	75.5	76.3	141.9	215.4	141.9
Manufacturing	100.0	89.1	86.6	107.1	158.8	181.5
End use						
Foodstuffs	100.0	111.4	122.3	178.8	286.5	300.5
Industrial supplies	100.0	88.8	87.5	107.2	168.4	174.0
Capital goods	100.0	95.2	98.4	134.6	165.5	201.8
Consumer goods	100.0	84.7	124.1	148.8	153.1	204.4
Terms of Trade Indexes						
Commodity ³	100.0	110.4	116.9	125.1	113.9	107.7
Income ⁴	100.0	126.2	157.9	207.6	178.1	186.0

¹ Including price effects of crude oil exports.

² Including price effects of sugar and oilseed imports.

³ Commodity terms of trade is the export price index divided by import price index.

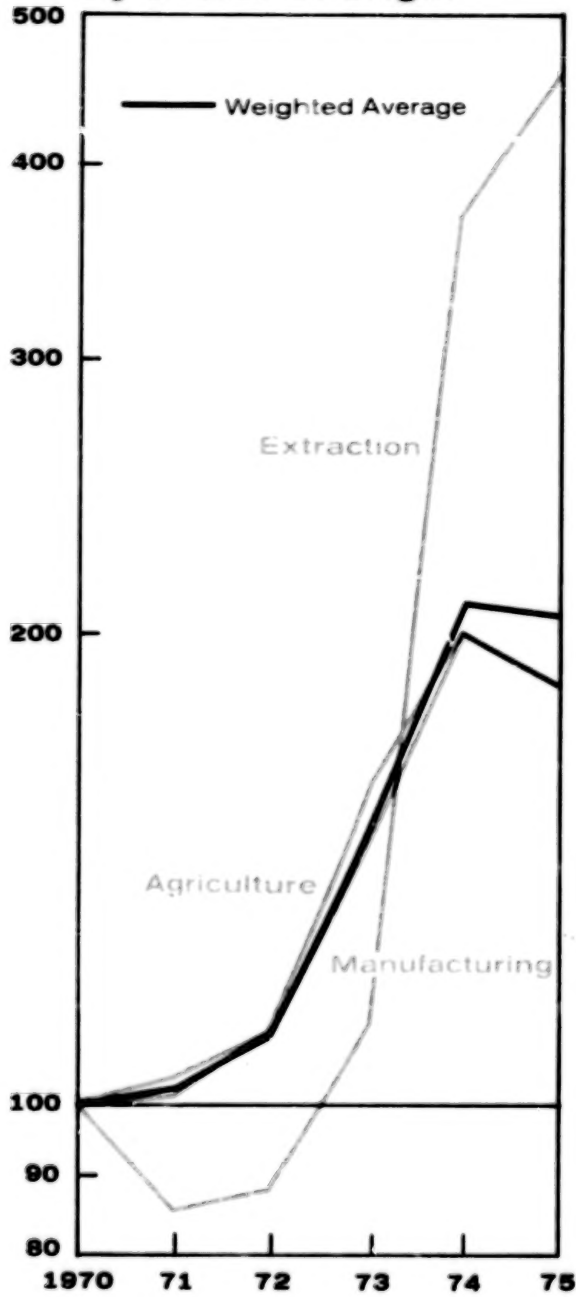
⁴ Income terms of trade is the commodity terms of trade index multiplied by the export quantity index. The income terms of trade is a measure of the "capacity to import" based on exports. It is not a measure of the total capacity to import, which depends not only on exports but also on capital inflows and other invisible exchange receipts.

Figure 2

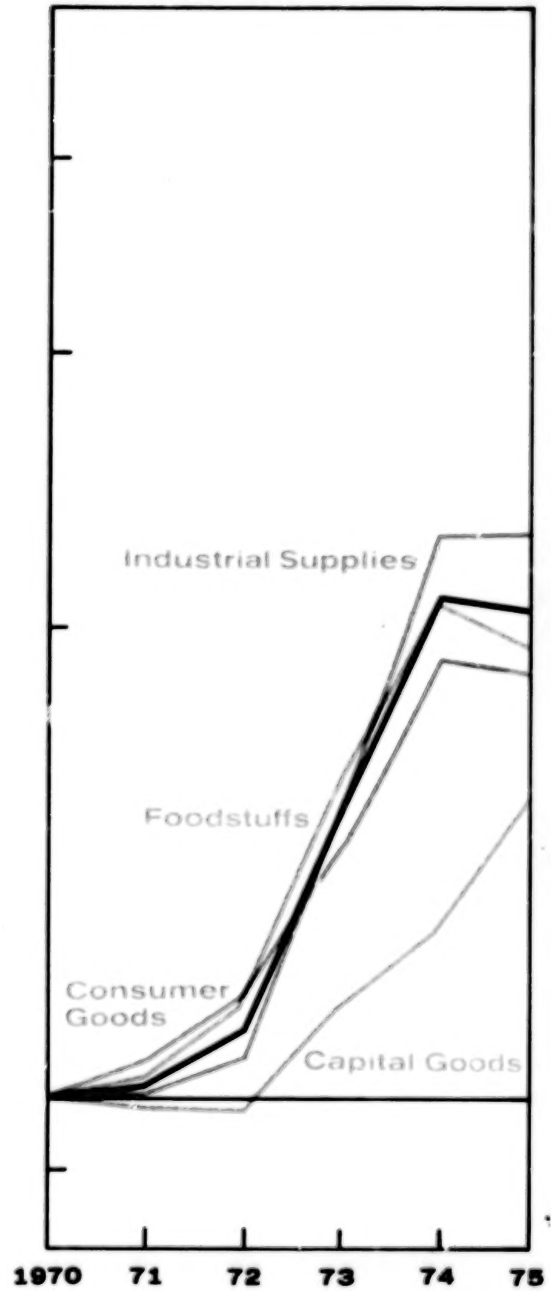
Export Prices in US Dollars

Index: 1970=100

By Sector of Origin



By End Use



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B. Import Prices

China's overall import price index generally followed the trend for manufactures, the major component (see figure 3). Imports of agricultural commodities—wheat, corn, sugar, soybeans, and cotton—exerted an upward influence in every year, while imports of commodities from the extractive sector—primarily natural rubber—had only a minor effect on the overall trend.

Import prices for capital goods did not begin to rise until 1973, a year after the devaluation of the dollar, but then increased at a fairly steady pace. The devaluation of the dollar probably was not reflected in immediate price increases because of the long lead times between contracts and deliveries—most of China's capital imports are not shelf items. Machinery and transport equipment had a relatively small impact on the overall import price index, however, until 1974 and 1975, when expenditures on these items climbed to 30 percent of the total import bill.

Prices for imports of industrial supplies—consisting chiefly of steel, nonferrous metals, and petrochemicals—had the greatest bearing on China's overall import price index. In general, steel prices fell in 1971 and 1972, but surpassed the 1970 level by 1973 and nearly doubled by 1975. Prices for finished products increased faster than for forms, as did prices for cold-rolled, high-carbon, alloy, and specialty steels. Import prices for copper, nickel, tungsten, and titanium fell sharply in 1971 and generally did not regain the level of 1970 again until 1975. Price trends for petrochemicals—including benzene, various fibers, plastics and their intermediates, ammonium chloride, ammonium sulfate, and urea—were highly correlated, due largely to their derivation from a common base. In most of these cases, however, the lag behind petroleum price hikes amounted to over a year.

C. Factors Affecting Price Trends

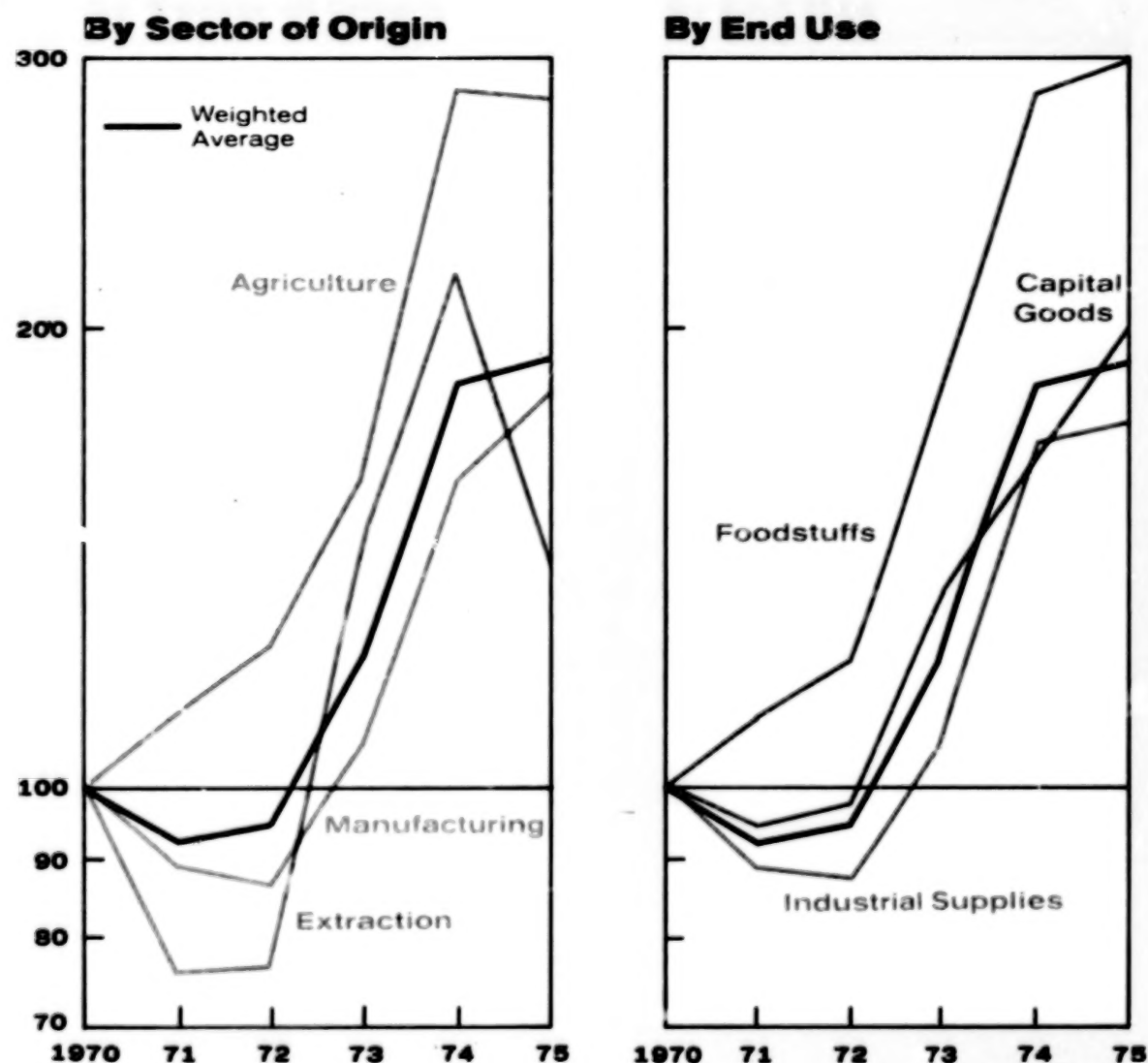
Prices for individual export commodities may have fluctuated just as much as prices for individual imports. Nevertheless, China's overall export price index tends to be less volatile than its import price index because China's exports are dispersed over a wide range of commodities, while imports are concentrated in a narrow range of goods that are essential to the state.

Because a handful of commodity groups account for the bulk of China's imports, price instability for any one of these can have a major effect on the overall import price index. On the other hand, the Chinese are probably in a

Figure 3

Import Prices in US Dollars

Index: 1970=100



Note: Import price index for consumer goods is not shown on "End Use" graphic. PRC imports of consumer goods have been negligible, consisting chiefly of Japanese and Swiss watches.

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better bargaining position on prices because they buy a significant share of the world's exports of some commodities. China, for example, is the world's largest importer of chemical fertilizers. Moreover, because all transactions are handled by state trading corporations, the Chinese probably derive some oligopsonistic power from the ability to offer potentially large sales to individual firms in the West. Just what effect this leverage has had on import price trends is difficult to assess. China's import prices have lagged behind rising world trade prices in recent years, but this may only reflect the long lead times between the signing of contracts and deliveries for many of China's imports—in some instances as long as a year or more.

The Chinese siphon off for export some of just about everything they produce. Until the Chinese began exporting crude oil, no single export took more than a small share of domestic output. Because China's exports are scattered over a myriad of products, a sharp drop in price for any single commodity can have only a small net effect on the overall export price index. For the same reason, China has little leverage on prices except in a few minor commodities—bristles, downs, feathers, tung and linseed oil, tungsten, and antimony, for example.

D. China's International Position

Table 2 compares China's export and import price indexes with export price indexes for other areas of the world. Dissimilarities in the composition of

Table 2
Comparative Price Trends¹

1970 = 100						
	Exports					
	Market Economies	Industrial Countries	Asian LDC's Excluding Oil	PRC Including Oil	PRC Excluding Oil ²	PRC Imports
1970.....	100	100	100	100	100	100
1971.....	105	105	98	102	102	92
1972.....	114	114	101	111	111	95
1973.....	141	136	140	152	152	122
1974.....	201	171	196	209	196	184
1975.....	218	191	177	205	185	191

¹ Price indexes for non-Communist countries are from International Monetary Fund, *International Financial Statistics*, May 1977.

² From table B-1.

trade largely explain the divergences between the indexes. Prices for China's exports, even excluding oil, increased faster than those of other Asian less developed countries (LDCs) but merely kept pace with inflation worldwide. Unlike China, the Asian LDCs depend on a few commodities—rice, rubber, sugar, copra, tin, and lumber—for a major share of export earnings. In general, prices for those commodities fell in 1971-72, shot up in 1973-74, and dropped again in 1975.

China's import price index oscillated around the export price index for the industrial countries—China's major suppliers—falling below in 1971 and 1972 largely because of declining prices for fertilizers, nonferrous metals, and steel, and rising above in 1974 mostly because of the sharp jump in prices for wheat, cotton, and rubber. Manufactures such as automobiles and other consumer durables, which have had a stabilizing influence on the export price index of the industrial countries, were not among China's imports.

E. Terms of Trade

Table 3 presents a method for converting the price indexes derived in terms of US dollars into indexes in terms of Chinese Ren Min Bi (RMB). From the Chinese point of view, export prices probably did not begin to rise perceptibly until 1972. Although China's export price index increased 11

Table 3

Conversion of PRC Export and Import Price Indexes From US Dollar to Ren Min Bi Indexes

	Exchange Rates		Exchange Rate Indexes ¹		RMB Price Indexes ²	
	RMB/\$	\$/RMB	\$/RMB	\$/SDR	Exports	Imports
1970.....	2.4587	0.4067	100.0	100.0	100.0	100.0
1971.....	2.3796	0.4203	103.3	100.3	98.7	89.4
1972.....	2.2420	0.4460	109.7	108.6	100.8	86.2
1973.....	1.9824	0.5044	124.0	119.2	122.6	98.0
1974.....	1.9524	0.5122	125.9	120.3	166.3	146.0
1975.....	1.8597	0.5377	132.2	121.4	155.3	144.2

¹ Although the RMB is not a convertible currency, export contracts have been denominated in RMB (payable in foreign currencies), and the Chinese have been careful to maintain consistent cross-rates between currencies. The RMB has appreciated against the dollar only slightly faster than the SDR.

² Derived by dividing the dollar export and import price indexes, found in table 1, by the \$/RMB exchange rate index.

percent in terms of dollars from 1970 to 1972, this was due entirely to the devaluation of the dollar: measured in Chinese RMB (or even in IMF Special Drawing Rights—SDRs), export prices were virtually unchanged. Import prices fell even faster in RMB than in dollars. The resulting terms of trade index is the same in both currencies, however. China's commodity terms of trade improved substantially between 1970 and 1973, but thereafter declined just as quickly as it had risen.

The Chinese insulate internal prices from external inflation, in effect, by taxing exports and using the proceeds (the difference between the procurement cost and export revenues) to subsidize imports. So long as export prices keep pace with rising import prices (and trade is balanced), the domestic economy can be isolated completely. There is no evidence that the Chinese responded to the deterioration in the terms of trade after 1973 by raising internal prices on goods that are exported; but the foreign trade corporations may have passed along price increases on some imports to the end users. This could affect purchasing decisions to the extent such decisions are made at a local level.

To central planners, exports are merely a means of financing imports. When trade is viewed in barter terms, the terms of trade becomes critical. If the terms of trade improve, a larger volume of imports can be financed with the same volume of exports, or exports can be reduced. Declining terms of trade spell trouble.

III. Aggregate Quantity Trends

Table 4 compares the current and constant dollar values of China's exports and imports. Current dollar values greatly exaggerated the real growth in trade. From 1970 to 1975 exports and imports both increased about 250 percent in value, but only 73 percent and 79 percent, respectively, in quantity, measured in 1970 prices. This is still a healthy growth rate—in comparison, China's GNP grew only 36 percent; and the volume of world trade, only about 30 percent over the same period.

Current dollar values, moreover, failed to reveal important trade developments. Price increases disguised the difficulties that Chinese exports encountered during the world recession, when the volume of PRC exports actually declined. In 1970 dollars, Chinese exports expanded at a rate of about 15 percent per year from 1970 to 1973, but fell in 1974, and just barely regained the 1973 level in 1975 (see figure 4). The 1970 dollar series largely

Table 4

Trade With Non-Communist Countries, in Current
and Constant Dollars ¹

Million US \$

	Exports			Imports		
	Current Dollars	1970 Dollars	1975 Dollars ²	Current Dollars	1970 Dollars	1975 Dollars ²
1970.....	1,570	1,570	2,973	1,702	1,702	3,975
1971.....	1,830	1,794	3,473	1,659	1,795	4,148
1972.....	2,345	2,120	4,015	2,087	2,206	4,937
1973.....	3,960	2,605	4,946	3,941	3,244	6,595
1974.....	5,140	2,455	4,921	5,743	3,125	6,231
1975.....	5,565	2,711	5,565	5,820	3,054	5,820

¹ Exports and imports are valued f.o.b.² Reflation of current dollar values into constant 1975 dollars uses 1975-based price indexes that are not presented in the appendixes.

reflects the real trends for China's traditional exports, however, since little weight is given to crude oil exports, which were valued at an estimated 1970 price of \$1.70 per barrel. In the 1975 dollar series, on the other hand, Chinese exports continued upward with only a marginal dip in 1974, solely because of the weight attached to crude oil exports, which were valued at \$12.88 per barrel—the average 1975 price for China's oil exports to Japan.*

Current dollar values also concealed significant trends in the real level of China's imports. Even though large-scale purchases of complete plants did not resume until 1972, the volume of imports picked up immediately following the Cultural Revolution and accelerated every year until 1974, when the worst trade deficit in PRC history led to a cutback in the volume of imports. Imports continued to fall through most of 1975.

A. Export Trends in Current and Constant Dollars

Table 5 presents estimates of current dollar values for China's exports classified according to sectors of origin, end-use categories, and major categories of the Standard International Trade Classification. The agricultural and manufacturing sectors have contributed about equally to China's export earnings, with the extractive sector coming into the picture only recently.

* The real increase in China's exports from 1973 on is probably somewhat lower than suggested by the 1975 dollar series and somewhat higher than indicated by the 1970 dollar series.

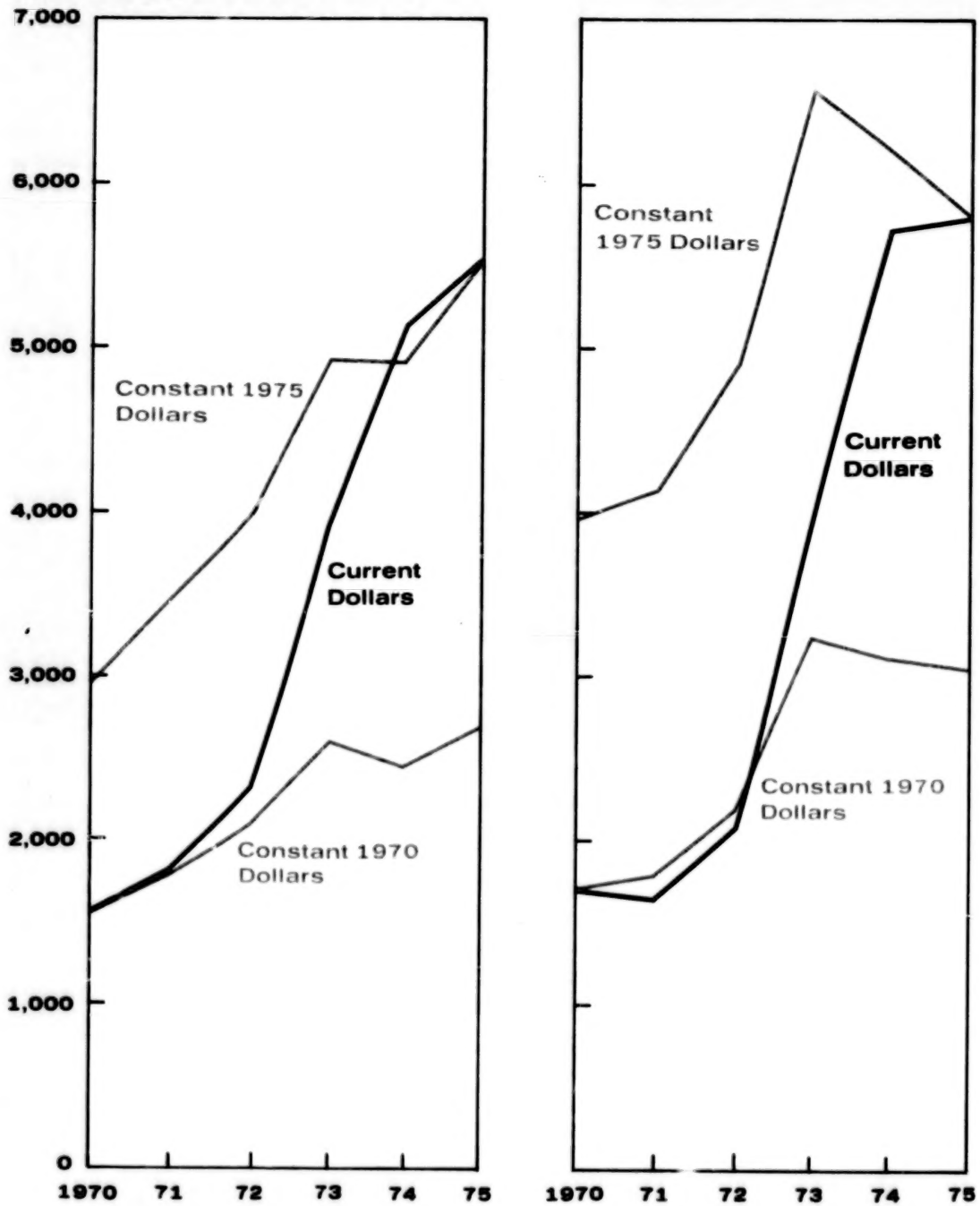
Figure 4

Trade with Non-Communist Countries

Exports, f.o.b.

Imports, f.o.b.

Million US \$



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Table 5
Exports to Non-Communist Countries
in Current Dollars, f.o.b.¹

	Million US \$					
	1970	1971	1972	1973	1974	1975
Total	1,570	1,830	2,345	3,960	5,140	5,565
Sectors of origin						
Agriculture	815	934	1,206	1,794	2,128	2,267
Extraction	59	62	60	120	542	902
Manufacturing	696	835	1,078	2,046	2,469	2,396
End use						
Foodstuffs	576	670	822	1,184	1,631	1,840
Industrial supplies	694	799	1,041	1,841	2,453	2,630
Capital goods	50	76	78	123	154	270
Consumer goods	250	285	404	812	902	825
Selected SITC categories²						
Live animals (00)	65	91	115	145	232	250
Meat (01)	71	89	114	158	177	215
Fish (03)	58	69	97	149	198	180
Cereals (04)	80	65	75	325	570	530
Fruits and vegetables (05)	145	143	166	225	265	270
Coffee, tea, and spices (07)	31	37	53	57	77	110
Oilseeds (22)	62	66	69	105	119	136
Textile fibers (26)	94	110	195	325	176	210
Crude animal and vegetable materials (29)	94	104	106	148	176	160
Petroleum and products (33)	4	5	7	50	450	815
Textile yarn and fabrics (65)	260	245	325	705	690	755
Iron and steel (67)	15	40	35	85	150	110
Nonferrous metals (68)	16	35	26	50	65	90
Clothing (84)	70	67	94	280	260	235
Footwear (85)	10	10	17	31	40	46
Miscellaneous manufactures (89)	60	64	101	221	240	198

¹ Data are estimated from the official trade statistics of reporting countries, adjusted to reflect Chinese exports, f.o.b. Estimates probably are accurate only to ± 5 percent. Data are rounded to the nearest \$1 million, however, in order to permit replication of procedures. Because of rounding, components may not add to totals shown.

² Data are arranged according to the two-digit divisions of the Standard International Trade Classification (SITC), revised edition. SITC nomenclature has been paraphrased, and SITC index numbers are provided in parentheses as a reference to more precise descriptions. This listing is not exhaustive: only those categories for which the corresponding price indexes are judged significant are broken out. Some series reflect revised estimates and cannot be derived directly from the current value shares shown in table B-2.

Until the surge in oil sales, consumer goods—including durables and foodstuffs—accounted for slightly more than half of China's exports; since 1973 exports of producer goods—industrial supplies and capital goods—have edged slightly ahead. Semifinished consumer goods such as textile fibers and

Table 6
Exports to Non-Communist Countries
in 1970 Dollars, f.o.b.¹

	Million 1970 US \$					
	1970	1971	1972	1973	1974	1975
Total	1,570	1,794	2,120	2,605	2,455	2,711
Sectors of origin						
Agriculture	815	921	1,080	1,112	1,065	1,220
Extraction	59	72	68	106	146	199
Manufacturing	696	802	971	1,386	1,243	1,292
End use						
Foodstuffs	576	650	713	732	790	949
Industrial supplies	694	797	982	1,204	1,074	1,147
Capital goods	50	77	79	107	119	173
Consumer goods	250	269	346	562	471	441
Selected SITC categories²						
Live animals (00)	65	87	106	103	112	124
Meat (01)	71	84	100	105	86	103
Fish (03)	58	66	79	92	121	114
Cereals (04)	80	73	74	163	205	264
Fruits and vegetables (05)	145	140	142	143	152	162
Coffee, tea, and spices (07)	31	35	47	37	47	39
Oilseeds (22)	62	62	60	62	54	58
Textile fibers (26)	94	103	180	177	85	151
Crude animal and vegetable materials (29)	94	112	103	115	117	91
Petroleum and products (33)	4	5	7	26	68	123
Textile yarn and fabrics (65)	260	229	289	418	300	417
Iron and steel (67)	15	42	38	56	70	66
Nonferrous metals (68)	16	41	31	50	34	50
Clothing (84)	70	63	86	184	117	122
Footwear (85)	10	9	15	24	23	27
Miscellaneous manufactures (89)	60	65	81	176	148	105

¹ Data are derived by dividing the current dollar values of exports found in table 5 by the corresponding price indexes found in tables 1 and B-2. Sampling error alone could be as great as ± 15 percent. Data are rounded to the nearest \$1 million, however, in order to permit replication of procedures. Because of rounding, components may not add to totals shown.

² This listing is not exhaustive: only some of the major two-digit divisions of the Standard International Trade Classification (SITC) are presented. SITC nomenclature has been paraphrased, and SITC index numbers are provided in parentheses as a reference to more precise descriptions. The series for textile fibers (SITC 26) and petroleum and petroleum products (SITC 33) are derived from disaggregated current value data not shown in table 5.

fabrics account for perhaps half of China's exports of industrial supplies, however.

Table 6 deflates the current values of table 5 into 1970 dollars. Growth rates flatten out and become less erratic in the constant dollar series. The

major fluctuations occurred largely in grains, textiles—fibers, fabrics, and clothing—and miscellaneous consumer goods. Some exports, such as oilseeds, were virtually constant over the entire period.

From 1970 to 1972, China's exports of agricultural goods and manufactures each grew at a real rate of 15 to 20 percent per year (see figure 5). In 1973 Peking stepped up exports of manufactures—particularly textile fabrics, clothing, and handicrafts. In order to boost production and export of finished textiles, Peking not only held back exports of raw textile fibers but also imported record quantities—cotton imports, for example, reached 400,000 metric tons. The former action was largely responsible for the reduced growth rate for agricultural exports. In 1974 exports of manufactures fell, as did agricultural commodities to a lesser degree. Only oil and rice appeared to offer any prospects for growth.* Economic recovery got under way in the developed countries in 1975, and China's exports of textile fibers and fabrics nearly returned to 1973 levels. Lack of demand among the LDCs continued to plague China's exports of consumer goods, however.

B. Import Trends in Current and Constant Dollars

Current and constant dollar values for China's imports are presented in tables 7 and 8, respectively. Most of China's foreign exchange expenditures have been for finished and semifinished manufactures, rather than for agricultural or extractive raw materials. Although China's purchases of foodstuffs and capital goods have attracted much attention, these have been small in comparison with China's imports of industrial supplies.

In real terms, China's imports of manufactures increased every year since 1970—taking a big leap in 1973 (see figure 6). Sharply increasing imports of capital goods were largely responsible for maintaining the volume of manufactures after 1973. Imports of most other commodities fell.

During 1971 to 1973, the first three years of the Fourth Five-Year Plan, the volume of China's imports of industrial supplies more than doubled, led by steel, nonferrous metals, chemicals, and cotton. Large orders for complete plants and equipment began in late 1972, but deliveries did not show up in magnitude until 1974 and 1975. To compensate for the sharp influx of capital goods and an inability to expand export earnings as rapidly as needed, the Chinese initially cut the volume of imports of industrial supplies—hardest hit

* From 1972 to 1975 the volume of China's grain exports more than tripled, and in 1975, the value of grain exports exceeded grain imports for the first time since 1960.

Figure 5

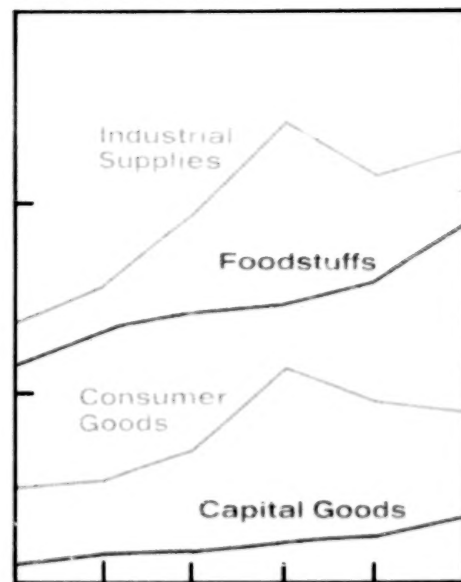
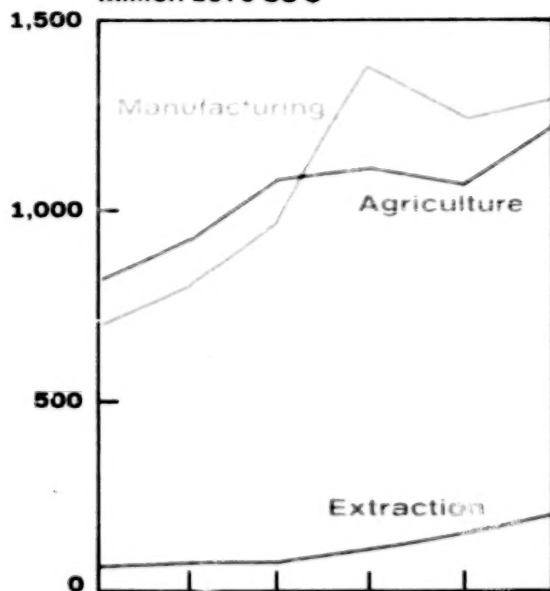
Exports to Non-Communist Countries

By Sector of Origin

By End Use

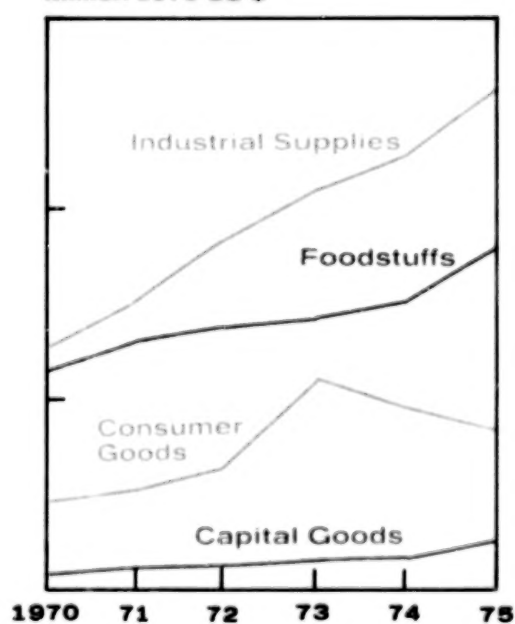
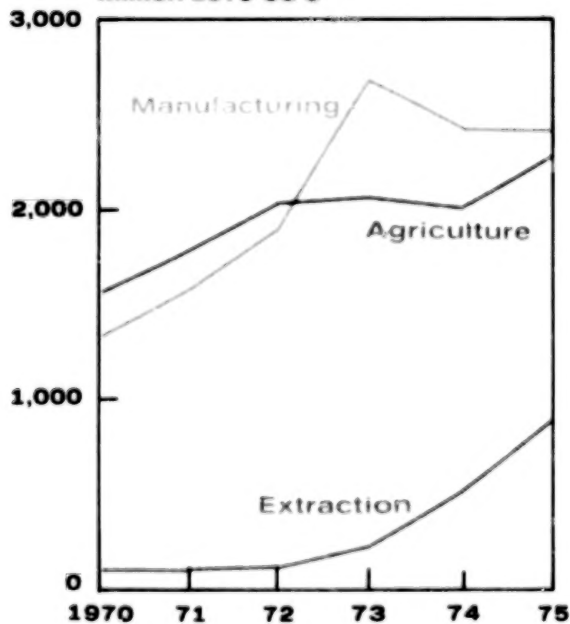
Million 1970 US \$

Million 1970 US \$



Million 1975 US \$

Million 1975 US \$



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Table 7

Imports from Non-Communist Countries
in Current Dollars, f.o.b.¹

Million US \$

	1970	1971	1972	1973	1974	1975
Total	1,702	1,659	2,087	3,941	5,743	5,820
Sectors of origin						
Agriculture.....	378	361	633	1,246	1,636	940
Extraction.....	88	86	92	242	217	194
Manufacturing.....	1,236	1,212	1,362	2,453	3,889	4,686
End use						
Foodstuffs.....	283	220	417	828	1,232	634
Industrial supplies.....	1,113	1,124	1,354	2,485	3,097	3,444
Capital goods.....	292	300	299	591	1,370	1,707
Consumer goods.....	13	14	17	36	43	34
Selected SITC categories²						
Cereals (04).....	256	197	286	655	974	524
Sugar (06).....	0	0	74	48	26	66
Oilseeds (22).....	1	0	10	46	131	14
Rubber (23).....	70	60	63	165	155	133
Textile fibers (26).....	94	126	222	370	466	346
Fertilizers (56).....	128	121	127	168	173	327
Plastic materials (58).....	26	18	33	46	114	70
Textile yarn and fabrics (65).....	37	33	43	60	155	73
Iron and steel (67).....	343	395	415	834	1,084	1,285
Nonferrous metals (68).....	182	127	195	355	359	386

¹ Data are estimated from the official trade statistics of reporting countries and reflect Chinese imports, f.o.b. Estimates probably are accurate only to ± 5 percent. Data are rounded to the nearest \$1 million, however, in order to permit replication of procedures. Because of rounding, components may not add to totals shown.

² This listing is not exhaustive: only some of the major two-digit divisions of the Standard International Trade Classification (SITC) are presented. SITC nomenclature has been paraphrased and SITC index numbers are provided in parentheses as a reference to more precise descriptions. Some series reflect revised estimates and cannot be derived directly from the current value shares shown in table C-2.

were cotton, copper, aluminum, rubber, and fertilizer. Iron and steel imports reached a plateau in 1973 and fell only marginally thereafter. Grain imports were lowered slightly in 1974, but in 1975 the volume was cut in half.

C. Recent Trends

In 1976 the current dollar value of China's exports to the non-Communist countries was virtually unchanged from 1975, at \$5.6 billion. Reports from businessmen attending the Fall 1975 and Spring 1976 Canton Trade Fairs

Table 8
Imports From Non-Communist Countries
in 1970 Dollars, f.o.b.¹

	Million 1970 US \$					
	1970	1971	1972	1973	1974	1975
Total	1,702	1,795	2,206	3,244	3,125	3,054
Sectors of origin						
Agriculture.....	378	323	512	783	575	335
Extraction.....	88	114	121	171	101	137
Manufacturing.....	1,236	1,360	1,573	2,290	2,449	2,582
End use						
Foodstuffs.....	283	197	341	463	430	211
Industrial supplies.....	1,113	1,266	1,547	2,318	1,839	1,979
Capital goods.....	292	315	304	439	828	846
Consumer goods.....	13	17	14	24	28	17
Selected SITC categories²						
Cereals (04).....	256	177	252	374	334	183
Sugar (06).....	0	0	39	21	4	10
Oilseeds (22).....	1	0	9	23	58	7
Rubber (23).....	70	82	85	113	75	95
Textile fibers (26).....	94	115	179	284	175	161
Fertilizers (56).....	128	133	137	133	88	87
Plastic materials (58).....	26	23	43	39	48	48
Textile yarn and fabrics (65).....	37	36	47	49	84	45
Iron and steel (67).....	343	424	440	688	640	665
Nonferrous metals (68).....	182	257	447	722	524	473

¹ Data are derived by dividing the current dollar values of imports found in table 7 by the corresponding price indexes found in tables 1 and C-2. Sampling error alone probably amounts to ± 5 percent, and homogeneity error cannot be estimated. Data are rounded to the nearest \$1 million, however, in order to permit replication of procedures. Because of rounding, components may not add to totals shown.

² This listing is not exhaustive; only some of the major two-digit divisions of the Standard International Trade Classification (SITC) are presented. SITC nomenclature has been paraphrased, and SITC index numbers are provided in parenthesis as a reference to more precise descriptions. The series for rubber (SITC 23) and textile fibers (SITC 26) are derived from disaggregated current value data not shown in table 4.

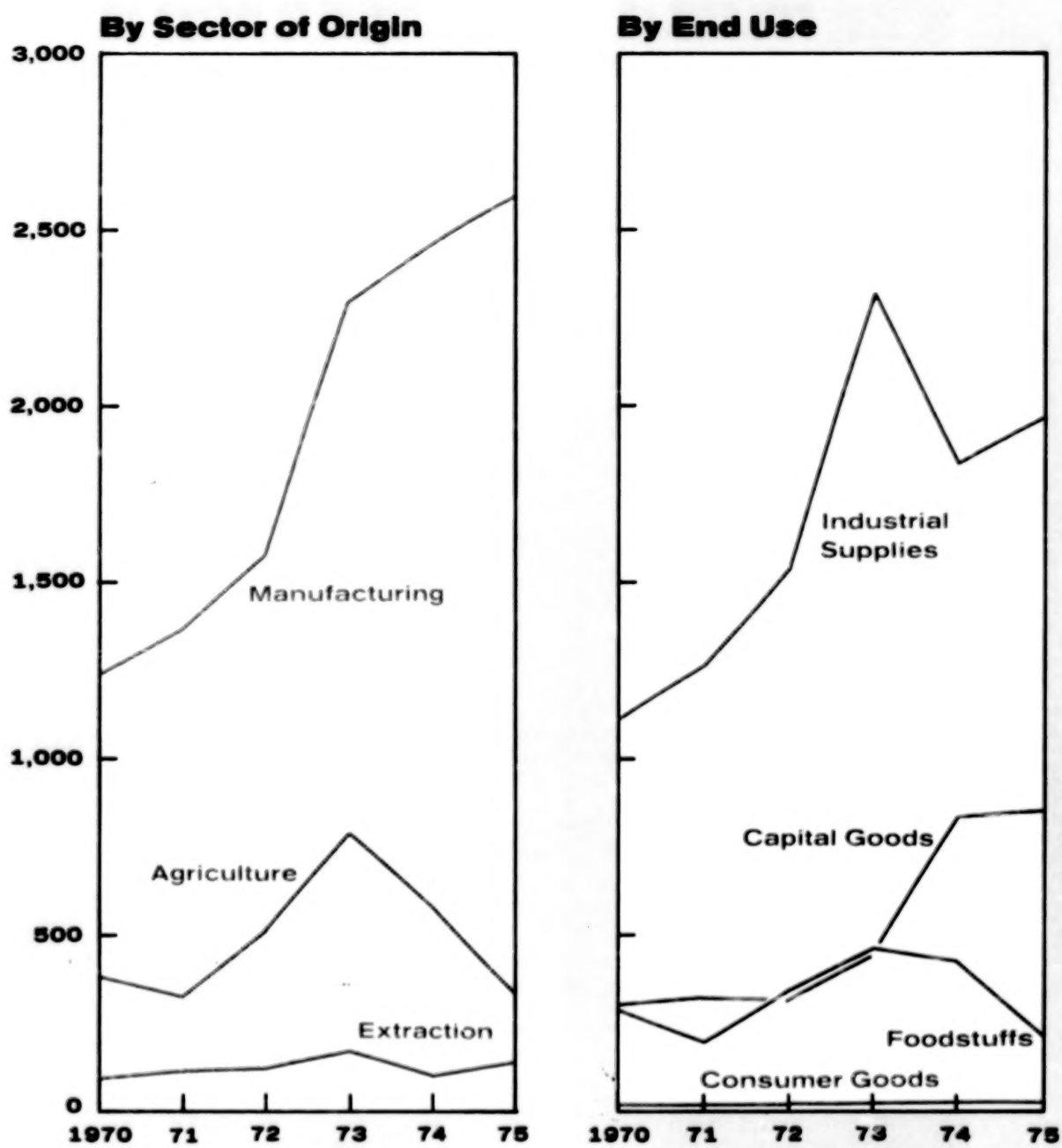
suggested that prices were up sharply. If true, this would indicate another decline in the volume of export deliveries last year, a not unlikely development in light of the domestic political upheavals and natural disasters that occurred.

China's imports from the non-Communist countries dropped to \$4.5 billion on an f.o.b. basis, down from \$5.8 billion in 1975—the first decline in the current dollar value since 1971. Limited data suggest that import prices fell significantly in 1976—unit values for wheat were down about 25 percent,

Figure 6

Imports from Non-Communist Countries

Million 1970 US \$



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steel about 30 percent, and fertilizers about 40 percent. Gross tonnages for China's major commodity imports were as follows:

	Thousand Metric Tons	
	1975	1976
IMPORTS UP		
Sugar	240	520
Rubber	240	290
Steel	3,900	4,500
Copper	120	150
IMPORTS DOWN		
Grain	3,300	2,000
Cotton	160	100
Fertilizers	2,900	2,500
Aluminum	400	200

The total 1976 dollar value of the commodities that were up in volume—\$1.9 billion—was more than twice that for the commodities that were down—\$900 million. These figures suggest that the decline in the real value of China's imports that began in 1974 may have been halted last year.

Most of these imports went into China in the first half of 1976, however; second half imports were running at only 50 percent of the first half.

D. Factors Affecting Real Trends in Trade

For a number of reasons, the trend in China's trade since 1970 has not followed changes in national income or production. China's imports, for example, rose at a real rate of almost 25 percent per year between 1970 and 1973, while the growth of China's GNP was averaging 7 percent. Between 1973 and 1975, the volume of imports fell, even though domestic production continued to grow.

Because of China's conservative financial policies, the real level of China's imports is linked through the terms of trade to the real level of exports. As China's commodity terms of trade change, the real level of both exports and imports generally changes in the same direction. The only exception was in 1975 when the real value of exports increased rather than declined. This probably reflects a Chinese need to generate export earnings to settle a larger-than-planned trade deficit in 1974.

Although China's exports amount to less than 3 percent of national output, they probably are hampered by domestic supply as well as foreign demand

constraints. The Chinese appear to move slowly in expanding supplies available for export in response to increased world prices. In fact, on occasion, the Chinese have reduced supplies in response to increased prices—if the price of a commodity increased significantly, earnings apparently exceeded the target sufficiently to divert some of the supplies that had been earmarked for export back into domestic use. Conversely, if the price fell, the Chinese ended up exporting more in order to meet their target for foreign exchange earnings.*

In contrast, the Chinese have been quite flexible in their ability to alter import plans to take advantage of falling prices or to shift from commodities that are rising in price relative to other imports. The import indexes indicate a 75-percent negative correlation between prices and quantities. Some of this correlation may be spurious, however, since the indexes reflect all shifts in demand and supply—domestic as well as foreign. For example, the Chinese may have bought a commodity not because its price had fallen, but because of a coincidental bottleneck developing in the domestic economy.

In China, the political system sets the boundaries within which the economics of central planning are generally free to operate. Occasionally political turbulence has spilled over into the economic arena—certainly during the Great Leap Forward, the Cultural Revolution, and the Interregnum of 1976. Although some trade policy issues—most notably, the question of exporting raw materials in return for capital goods—divided China's leadership in the recent past, all sides agreed in principle on self-reliance and on China's conservative financial policies. Even though trade expanded rapidly from 1969 to 1973, Peking pursued a policy of import substitution, aimed at reducing China's reliance on foreign economies. At no time did any Chinese leader espouse either complete autarky or an open-door trade policy. In 1974, Peking—still under the guidance of Chou En-lai—cut back imports in order to prevent a balance-of-payment crisis. Although criticism of "worshipping things foreign" appeared in the PRC media at that time as part of the Anti-Confucius Campaign, economic factors probably explain the decline in the real level of trade. In late 1975 and early 1976, Peking—by then

* For example, from 1973 to 1974, the average price per head for China's hog exports to Hong Kong jumped from \$43.87 to \$63.58, but the Chinese cut back deliveries from 2.68 million to 2.37 million head as foreign exchange earnings climbed from US \$118 million to \$151 million. Domestic supply constraints may have been the reason for the cutback since the hog population in Kwangtung Province, neighboring Hong Kong, had remained constant in 1973 and 1974, at 14.4 million to 14.5 million head. (The hog population in China as a whole, however, increased from 202 million head to 231 million). Conversely, from 1974 to 1975 the average Hong Kong price fell marginally, but the Chinese increased exports to 2.61 million head. In Kwangtung, the hog population had increased to 15.8 million head.

under the leadership of Teng Hsiao-ping—stepped up purchases, and imports expanded. Teng's ouster and the political turmoil that followed resulted in a halt in many trade negotiations and a sharp decline in imports in the second half of 1976. With the "Gang of Four" eliminated, the current Chinese leadership has now called for a return to the active trade policies initiated by Chou. Nevertheless, China's ability to increase exports will remain a major constraint on the growth of imports, and a basically cautious Chinese attitude towards trade is likely to persist for many years.

Appendix A

Methodology

This appendix contains a brief description of the procedures used to estimate the price indexes for China's exports and imports found in appendixes B and C, respectively, and in table 1 of the text, and a short analysis of the accuracy of these indexes. A more detailed explanation and a complete listing of the sample commodities found in tables B-3 and C-3 are available upon request.

The major objective of this research was to construct price—and ultimately quantity—indexes for China's trade that are roughly comparable to the indexes of countries that publish detailed trade statistics. Index number practices vary from country to country with respect to prices, sampling procedures, weighting formulas, and construction techniques. The United States, Japan, and West Germany, for example, construct export and import price indexes from a sample of contract prices taken at the time of shipment or delivery. All other countries derive unit value indexes from highly disaggregated trade data. Only the United States uses the chain-linked (moving base) Fisher formula for both the price and quantity indexes. Other countries use some combination of Laspeyres, Paasche, or Fisher indexes, but with fixed base years. Probably most construct Laspeyres quantity indexes and Paasche price indexes, the latter derived by dividing the appropriate indexes of current value by the former.

In previous studies, rough estimates of price trends for China's trade were made using the price indexes of trade for "representative" market economies as a proxy. However, this procedure can lead to erroneous results, because (a) the commodities reflected in the surrogate indexes are not necessarily those that China trades, and (b) China's prices—both for exports and imports—may diverge from free market prices as a result of barter arrangements, political maneuvering, and certain other features of state trading. To be reliable, therefore, indexes for China's trade must reflect the prices and quantities of goods actually traded by China.

The Construction of Indexes for PRC Trade

In this study, unit value indexes have been derived for China's exports and imports from trade partner statistics. The indexes were constructed using current value weights (the Paasche formula) with a fixed base year. The availability of data dictated the methods used to construct the indexes.

Prices and quantities for major Chinese contracts are occasionally published in trade reports and press articles. This information generally is not in a form suitable to derive price indexes, however. Indexes that are used to deflate trade should reflect prices at the time of shipment, since value data are recorded on that basis. Contract prices should be used to derive price indexes only if they are concurrent with the value data. To obtain price data on that basis entails a massive sampling effort—so far, afforded only by the United States, West Germany, and Japan. Unit value indexes have the advantage of automatically being in phase with the value data they are designed to deflate. Furthermore, the benefits of a much larger sample size that can be obtained from trade returns probably outweigh the disadvantage of using unit values as a proxy for prices.

Highly disaggregated commodity data have never been compiled for China's trade. Although the *Country-by-Commodity Series*,* prepared by the US Department of Commerce through 1974, contains quantity and value information for China's trade with 30 to 40 countries, the data have been aggregated to approximately the four- or five-digit level of the Standard International Trade Classification (SITC) and are not sufficiently detailed to provide accurate unit values. The only alternative was to derive unit values for commodities from six-, seven-, and eight-digit levels of the official statistics of China's trade partners.

Not all developed countries and few LDCs publish country-by-commodity trade data which are that detailed, however. The United Kingdom, for example, publishes country-by-commodity data only down to the five-digit level, even though the statistical office publishes much more detailed data on a commodity-only basis. In order to prevent China's trade with the developed countries from assuming inordinate weight in the price indexes, the trade partner statistics were sampled on a geographic basis. For China's exports, data were drawn from the country-by-commodity trade statistics of Japan, France, and Canada among the developed countries; and

* US Department of Commerce, International Trade Analysis Staff, *Country-by-Commodity Series, Exports to and Imports from Communist Areas in Eastern Europe and Asia, and Cuba by Free World Countries*

from those of Hong Kong, Singapore, and the East African Customs Union among the LDCs. On the import side, the French statistics were dropped; and German, Swedish, and Moroccan data were added.

Stratified sampling techniques were used in order to select the sample commodities from each country's annual trade returns. The final data set consisted of 528 export commodities and 192 import commodities. Examples of the unit value statistics derived for each of the sample commodities are in tables B-3 and C-3.

The unit value indexes for the sample commodities were first aggregated into price indexes for two-digit SITC divisions using the current value share of each sample commodity in the two-digit group as a weight. The price indexes for the 55 export and 33 import divisions are presented in tables B-2 and C-2.

The two-digit price indexes were then weighted by the known two-digit current value shares for China's trade with the non-Communist countries as a whole * to form aggregate price indexes for exports and imports and for various economic classifications of traded items. Because price trends tend to be more highly correlated within divisions than between divisions, the reweighting gives proper emphasis to price trends for various groups of commodities and prevents any single commodity, such as red spring wheat imports from Canada, from having inordinate weight in the overall price index. The two-digit level price indexes were assigned to the various economic classes as shown in table A-1. The aggregate price indexes are in tables B-1 and C-1.

All price indexes in this research aid are of the Paasche variety, which may be expressed as a weighted aggregative:

$$P_t = \frac{\sum p_t \cdot q_t}{\sum p_0 \cdot q_t}$$

where: "P" is the Paasche price index, "p" and "q" refer to the prices and quantities of the commodities in the sample; and the subscripts "0" and "t"

* Derived from the annual *Summary Tables, Exports to and Imports from Communist Areas in Eastern Europe and Asia, and Cuba, by Free World Countries*, prepared by US Department of Commerce, International Trade Analysis Staff (ITAS) through 1974. For 1975, the data were from CIA, *People's Republic of China: International Trade Handbook*, October 1976. The two-digit SITC level was chosen because it is the most detailed level for which nearly complete current value data on China's trade with the non-Communist countries can be obtained.

Table A-1

**Concordance of SITC Classification With Economic
Classifications of Traded Goods¹**

SITC	Classification	Economic Class		SITC	Classification	Economic Class	
		Sector of Origin	End Use			Sector of Origin	End Use
00	Live animals	A	F	52	Mineral tars	M	I
01	Meat	A	F	53	Dyeing materials	M	I
02	Dairy products	A	F	54	Pharmaceutical products	M	C
03	Fish	A	F	55A	Essential oils	M	I
04	Cereals	A	F	55B	Perfumery and soaps	M	C
05	Fruits and vegetables	A	F	56	Fertilizers, manufactured	M	I
06	Sugar	A	F	57	Explosives	M	I
07	Coffee, tea, and spices	A	F	58	Plastics	M	I
08	Animal feedstuffs	A	F	59	Chemicals, n.e.s.	M	I
09	Miscellaneous food preparations	A	F				
11	Beverages	M	F	61	Leather and dressed-fur skins	M	I
12A	Tobacco, unmanufactured	A	I	62	Rubber manufactures	M	I
12B	Tobacco, manufactured	M	C	63	Wood and cork manufactures	M	I
21	Hides and skins	A	I	64	Paper and paperboard	M	I
22	Oil seeds, nuts, and kernels	A	F	65A	Textile yarn and fabrics	M	I
23A	Crude rubber, natural	E	I	65B	Textile articles: blankets and rugs	M	C
23B	Crude rubber, synthetic	M	I	66	Mineral manufactures	M	I
24	Wood and cork	E	I	67	Iron and steel	M	I
25	Pulp	M	I	68	Nonferrous metals	M	I
26A	Textile fibers, natural	A	I	69A	Metal manufactures: industrial	M	I
26B	Textile fibers, synthetic	M	I	69B	Metal manufactures: hand tools	M	K
27	Crude minerals and fertilizers	E	I	69C	Metal manufactures: household products	M	C
28	Metalliferous ores and scrap metals	E	I	71	Nonelectric machinery	M	K
29	Crude animal and vegetable materials	A	I	72	Electric machinery	M	K
				73	Transport equipment	M	K
32	Coal and coke	E	I	81	Plumbing, heating, and lighting fixtures	M	C
33A	Crude oil	E	I	82	Furniture	M	C
33B	Petroleum products	M	I	83	Travel goods and handbags	M	C
41	Animal oils and fats	A	I	84	Clothing	M	C
42	Vegetable oils and fats	A	I	85	Footwear	M	C
43	Animal and vegetable oils, processed	M	I	86A	Precision instruments	M	K
				86B	Watches and clocks	M	C
51	Chemical elements and compounds	M	I	89	Miscellaneous manufactures	M	C

Economic Classification of Code Letters

Sector of Origin

- A — Agriculture
- E — Extraction
- M — Manufacturing

End Use

- F — Foodstuffs
- I — Industrial supplies
- K — Capital goods
- C — Consumer goods

¹ This system of concordances was designed specifically to accommodate the data that are available for China's trade, although it generally follows the *Standard Industrial Classification* for economic sectors and the US OBE, *End-Use Commodity Categories*. Commodities within a two-digit division of the SITC generally are homogeneous enough to fit entirely within one of the sector and end-use categories. Some two-digit divisions, however, must be

subdivided in order to distribute China's exports or imports properly. China's exports of tobacco, for instance, are composed of both raw tobacco and cigarettes. Raw tobacco (SITC 121) is included in the agricultural sector and as an industrial supply. Processed tobacco (SITC 122) is included as a product of the manufacturing sector and as a consumer good. Processed foodstuffs, which have accounted for 5 to 10 percent of total PRC exports to the non-Communist countries in recent years, are difficult to separate from other foodstuffs even at the five-digit level of the SITC and were, therefore, left in the agricultural sector, although they rightfully belong in manufacturing. Some two-digit divisions contained commodities such as peanut oil that serve dual purposes; these commodity groups were assigned arbitrarily to the most likely end-use category. The sector of origin and end-use categories in this Research Aid differ somewhat from the categories found in *PRC: International Trade Handbook*. In this paper, for example, the foodstuffs series includes oilseeds but excludes tobacco. Likewise, the series for capital goods covers hand tools and precision instruments in addition to machinery and transport equipment.

are the base year and current year, respectively. This formula was reworked into the algebraically identical weighted average of price relatives:

$$P_t = \frac{1}{\sum \left(\frac{P_0}{P_t} \right) \left(\frac{P_t \cdot Q_t}{\sum P_t \cdot Q_t} \right)}$$

This form of the expression was used because the required data were readily available. The expression shows that the weight attached to each price relative is the current value share of each item in the sample. This is true both at the most disaggregated level and at the two-digit level.

Crude oil exports and sugar and oilseed imports are not included in the price indexes in the appendixes. Since these three groups of commodities were not traded by China in every year since 1970, a separate solution was required in order to incorporate them into the aggregate price indexes and constant value series presented in the text. The procedure was the same for all three: quantities for the commodities were derived directly from trade partner statistics. Export or import prices for 1970 were estimated from market prices, and multiplied by the quantities to derive a constant value series in 1970 dollars. The Paasche price indexes were then derived by dividing the current value of total exports or imports by the sum of the constant 1970 dollar values. Table A-2 presents the procedure for China's exports as an example. Tables A-3 and A-4 present the quantity and value information for sugar and oilseed imports used in estimating the constant value series and aggregate price indexes for China's imports.

The Accuracy of the Indexes

All index numbers contain at least three sources of error: (1) a formula error, resulting from the choice of weights used to average prices or quantities; (2) a sampling error, since for all practical purposes every index is based on sampling; and (3) a homogeneity error, resulting from the introduction of new goods or the elimination of old, for which comparisons of actual traded prices and quantities in the base and current years are not possible. If unit values are used as a proxy for prices, a fourth error arises.

In using unit value indexes, it must always be explicitly recognized that they reflect changes both in prices and in the quality of the items traded. Quality changes have less effect on the indexes as commodities become more narrowly defined. The accuracy of a unit value index is thus a function of the

Table A-2
Procedure for Estimating Aggregate Price Index
for PRC Exports, Including Crude Oil ¹

	Million US \$		
	Total Exports	Oil Exports	Non-Oil Exports
Current Value			
$(\sum p_t \cdot q_t)$	(1)	(2)	(3)
1970.....	1,570		1,570
1971.....	1,830		1,830
1972.....	2,345		2,345
1973.....	3,960	32	3,928
1974.....	5,140	413	4,727
1975.....	5,565	741	4,824
Constant Value			
$(\sum p_{70} \cdot q_t)$	(4)	(5)	(6)
1970.....	1,570		1,570
1971.....	1,794		1,794
1972.....	2,120		2,120
1973.....	2,605	12	2,593
1974.....	2,455	49	2,406
1975.....	2,711	98	2,613
Paasche Price Index:			
1970=100			
$(\sum p_t \cdot q_t / \sum p_{70} \cdot q_t)$	(7)		
1970.....	100.0		
1971.....	102.0		
1972.....	133.6		
1973.....	152.0		
1974.....	209.4		
1975.....	205.3		

¹ The current dollar values of China's crude oil exports (2) were subtracted from total exports (1) for each year to obtain the value of non-oil exports (3). Column 3 was divided by the price index for PRC exports, excluding oil, taken from table B-1 to derive the 1970 values for non-oil exports (6). A price of \$1.70 per barrel was estimated based on the average price of Indonesia's crude oil exports to Japan for 1970. This price was applied to the quantity of China's crude oil exports for 1973 to 1975 to obtain the 1970 dollar values (5). Columns 6 and 5 summed to the 1970 dollar values for total exports (4). The aggregate export price index (7) was then derived by dividing column 1 by column 4.

Table A-3

Sugar Imports ¹

	1972		1973		1974		1975	
	Metric Tons	Thousand US\$	Metric Tons	Thousand US\$	Metric Tons	Thousand US\$	Metric Tons	Thousand US\$
Total ²	471,000	73,576	259,000	48,328	54,000	25,965	123,000	65,735
Australia	35,560	4,743	63,910	12,205	29,880	14,728	35,700	13,241
Brazil	429,000	68,303	195,100	36,123	3,620	560	71,940	46,670
Other ³	6,000	840	0	0	20,940	10,680	15,015	5,827

¹ Data are compiled from official trade statistics of China's trade partners, and the values are f.o.b. Except for 82,000 tons of refined Brazilian sugar (worth \$15,114,000) imported in 1972, most Chinese imports are of raw sugar.

² Quantities are rounded to the nearest thousand metric tons.

³ Includes Guyana, Jamaica, the Congo, and the Philippines. No sugar was imported from the non-Communist countries prior to 1972.

Table A-4

PRC: Oilseed imports ¹

	1970		1972		1973		1974		1975	
	Metric Tons	Thousand US\$	Metric Tons	Thousand US\$	Metric Tons	Thousand US\$	Metric Tons	Thousand US\$	Metric Tons	Thousand US\$
Total		530		9,752		46,313		130,535		14,000
Soybeans ²	0	0	1,486	190	198,249	43,365	569,674	126,519	31,507	6,706
Sesame seeds ³	1,973	530	6,907	1,966	9,867	2,948	NA	NA	NA	NA
Peanuts ⁴	0	0	29,166	7,596	0	0	NA	NA	NA	NA

¹ Data are compiled from publications of the US Government. Because commodity detail is not reported by all countries, values are necessarily understated. Nevertheless, PRC imports of oilseeds have been erratic, as suggested by the above figures. No purchases are believed to have been made by China in 1971. Value data are f.o.b.

² Includes imports from Brazil and the United States.

³ Imported from the Sudan.

⁴ Imported from the Sudan and Nigeria.

variance in prices of all the items subsumed within a commodity classification. If that variance is small, unit value indexes will accurately reflect true price indexes, even if composition shifts have occurred.

At any specified level of a trade classification system, unit values for more complex products appear to be less reliable than those for commodities with little processing. This is a particular problem in the case of the unit value indexes for capital goods, where a great variety of machinery may be included within even the most specific categories. Customs classifications generally were not designed for the purpose of deriving unit value indexes, however, and the accuracy of unit values are not always a function of the stage of processing. For example, PRC exports of walnuts and table salt—which might appear homogeneous—vary significantly in price, depending on grade.

For comparisons over short periods of time, unit value indexes probably provide reasonable approximations, since market patterns remain fairly constant and quality shifts tend to be random and thus average out when the indexes for individual commodities are aggregated. Over longer periods, improvements in the quality of products may bias a unit value index to the high side.

The Laspeyres and Paasche indexes provide a conservative estimate of the upper and lower bounds, respectively, of a true utility price index.* The Paasche price indexes in this paper, therefore, tend to underestimate the true increase in prices; and the constant dollar values tend to overestimate the real increase in quantities. For PRC exports, formula error may have amounted to as much as 1 percent for contiguous years and up to 5 percent for a comparison between 1970 and 1974. For PRC imports, formula error may have amounted to as much as 2 percent for contiguous years and up to 23 percent for a comparison between 1970 and 1975.

The downward bias of the Paasche formula, however, tends to compensate for any upward bias resulting from the use of unit values as a substitute for prices. The Paasche index thus provides more accurate results than if a Laspeyres index had been used to deflate trade. Furthermore, the Paasche price index yields easily interpretable results when used to deflate the current value of trade:

$$\frac{\text{Current Value}}{\text{Paasche Price Index}} = \frac{\sum p_t \cdot q_t}{\left(\frac{\sum p_t \cdot q_t}{\sum p_0 \cdot q_t} \right)} = \sum p_0 \cdot q_t$$

* For more on this subject, see Melville J. Ulmer, *The Economic Theory of Cost of Living Index Numbers* (New York: Columbia University Press, 1949).

The latter expression is merely the total value of current year quantities (q_t) if those quantities had been traded at base year prices (p_0).

Although statistics are available to measure the sampling error of index numbers when sampling is stratified, weighted, or without replacement, no formula has been devised to measure the variance of the average when all three techniques are used, as in this research aid; * therefore, this error was estimated by analyzing variances for several subsets of the overall sample. For China's exports, the sample size for the items in table B-3 ranged from 31 percent to 40 percent of the value of China's non-oil exports to the non-Communist countries. The maximum sampling error for the export price index is estimated at ± 15 percent. With oil included in the sample, the sample size increased to 46 percent in 1975 and error was reduced, perhaps to ± 10 percent. For China's imports the sample size for the items in table C-3 was consistently above 50 percent, and the maximum sampling error was estimated at ± 5 percent.

Homogeneity error, resulting from unique commodities appearing or disappearing from trade, cannot be measured. For China's exports, this error is probably minor. Although the Chinese have made several claims about the increasing numbers of commodities available for export, many of these items are for exhibition purposes, and actual sales are probably small relative to China's traditional exports. For China's imports, however, homogeneity error could be large—many of China's capital goods imports are one of a kind.

Two steps were taken to minimize homogeneity errors: first, the three most important groups of commodities that were not traded in each of the six years covered by the indexes were deflated separately. Theoretically, the base year price used to integrate these commodities into the price indexes and constant value series should have been the y-intercepts of China's export supply and import demand functions. Because these functions cannot be estimated, world market prices were used instead. This procedure (i.e., the use of market prices as a substitute for the y-intercept price) tends to overestimate the true utility price index for China's crude oil exports and to underestimate the true increase in prices for China's sugar and oilseed imports (for the 1970-based indexes). On the export side, the actual price that would have been sufficient to induce the Chinese to export just one unit of crude oil in 1970 must have been somewhat higher than the world market price. *Prima facie* evidence of this is the fact that China did not export any crude oil at the going price of \$1.70 per barrel in 1970. (Not until oil reached \$4.54 per barrel did

* For further details, see Bruce D. Mudgett, *Index Numbers* (New York: John Wiley & Sons, Inc., 1951), pp. 51-54.

China export a drop). On the import side, the actual price that would have sufficed to induce the Chinese to import sugar, soybeans, and other oilseeds must have been somewhat lower than the world market price, which obviously the Chinese refused to pay. The degree of distortion in the export and import price indexes resulting from the use of market prices as a substitute for the y-intercept price is impossible to determine.

Second, homogeneity errors were reduced by first constructing the Paasche price indexes directly from the data for commodities covered in the sample, and then deriving the constant value data—or quantity indexes—by dividing the price indexes into total value data for all commodities. This procedure assumes that the price trends for commodities not covered in the index are similar to the trends for those that are. Most countries, however, construct quantity indexes first (simply because it involves fewer steps), and then derive price indexes. An implicit assumption of this latter procedure is that quantity trends for commodities that are not included in the index are similar to the trends for those that are. Price trends probably are more highly correlated than quantity trends, however, both because of market imperfections (prices, once raised, are hard to lower) and because of inflationary fiscal policies worldwide. For this reason, homogeneity errors can be reduced by constructing price indexes first.

All errors considered, the export price indexes developed in this paper are probably more accurate than the import price indexes. Although sampling error is smaller for the import price indexes, unit value error, formula error, and homogeneity error are smaller for the export price indexes.

APPENDIX B

EXPORTS

Table B-1

Aggregate Price Indexes and Current Value Weights for PRC Exports, Excluding Crude Oil

	1970	1971	1972	1973	1974	1975
Paasche price indexes (1970=100)						
Exports	100.0	102.0	110.6	151.5	196.5	184.6
Sectors of origin						
Agriculture	100.0	101.4	111.1	161.3	199.8	185.8
Extraction	100.0	85.8	88.6	93.9	133.1	160.1
Manufacturing	100.0	104.1	111.0	147.6	198.7	185.5
End use						
Foodstuffs	100.0	103.0	115.3	161.7	206.5	193.8
Industrial supplies	100.0	100.2	106.0	151.8	199.1	180.0
Capital goods	100.0	98.8	98.6	115.4	128.9	156.5
Consumer goods	100.0	105.9	116.9	144.6	191.4	166.9
Current value weights						
Exports	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
Sectors of origin						
Agriculture	0.51940	0.51024	0.51441	0.45678	0.45026	0.46995
Extraction	0.03746	0.03364	0.02571	0.02230	0.02740	0.03343
Manufacturing	0.44313	0.45611	0.45987	0.52090	0.52233	0.49660
End use						
Foodstuffs	0.36663	0.36609	0.35035	0.30131	0.34506	0.38140
Industrial supplies	0.44204	0.43643	0.44411	0.46056	0.43159	0.39158
Capital goods	0.03202	0.04173	0.03332	0.03140	0.03253	0.05590
Consumer goods	0.15929	0.15573	0.17220	0.20672	0.19080	0.17110

Table B-2

**Paasche Price Indexes and Current Value Weights for PRC Exports, Excluding Crude Oil, at
the Two-Digit Level of the Standard International Trade Classification**

SITC	Classification	1970	1971	1972	1973	1974	1975
00	Live animals						
	Index	100.0	104.2	108.5	140.7	206.3	201.6
	Weight	0.04170	0.04963	0.04924	0.03672	0.04521	0.04493
01	Meat						
	Index	100.0	105.8	113.9	150.1	204.8	209.3
	Weight	0.04518	0.04896	0.04847	0.03986	0.03453	0.03866
02	Dairy products						
	Index	100.0	101.7	109.5	130.7	187.4	193.2
	Weight	0.01778	0.01775	0.01414	0.01121	0.01370	0.01358
03	Fish						
	Index	100.0	105.0	123.3	162.1	164.2	158.5
	Weight	0.03725	0.03795	0.04118	0.03762	0.03853	0.03239
04	Cereals						
	Index	100.0	88.8	101.7	199.0	277.9	200.8
	Weight	0.05974	0.03924	0.03056	0.04376	0.07077	0.11076
05	Fruits and vegetables						
	Index	100.0	102.4	117.0	157.2	173.9	167.0
	Weight	0.08400	0.08724	0.08289	0.06450	0.06427	0.05642
06	Sugar and honey						
	Index	100.0	128.2	184.1	271.3	438.9	435.3
	Weight	0.00760	0.01034	0.01246	0.01134	0.01662	0.01044
07	Coffee, tea, and spices						
	Index	100.0	104.4	112.9	155.3	164.3	158.6
	Weight	0.01947	0.02043	0.02271	0.01440	0.01503	0.01985
08	Animal feedstuffs						
	Index	100.0	109.9	111.2	155.6	199.1	212.9
	Weight	0.00402	0.00502	0.00420	0.00473	0.00430	0.01462
09	Miscellaneous food preparations						
	Index	100.0	105.0	116.1	156.9	195.0	202.1
	Weight	0.00445	0.00416	0.00432	0.00530	0.00681	0.00731
11	Beverages						
	Index	100.0	109.5	127.3	159.8	181.9	192.2
	Weight	0.00585	0.00549	0.00575	0.00492	0.00455	0.00417
12A	Tobacco, unmanufactured						
	Index	100.0	93.0	105.5	147.3	203.3	244.2
	Weight	0.00527	0.00544	0.00442	0.00411	0.00435	0.00391
12B	Tobacco, manufactured						
	Index	100.0	123.7	175.0	203.4	194.5	246.0
	Weight	0.00131	0.00122	0.00110	0.00102	0.00108	0.00130
21	Hides and skins, undressed						
	Index	100.0	97.6	113.0	191.1	231.3	173.6
	Weight	0.01074	0.01111	0.01110	0.00763	0.00456	0.00417

Table B-2

Paasche Price Indexes and Current Value Weights for PRC Exports, Excluding Crude Oil, at the Two-Digit Level of the Standard International Trade Classification (Continued)

SITC	Classification	1970	1971	1972	1973	1974	1975
22	Oilseeds, oil nuts, and oil kernels						
	Index.....	100.0	106.8	115.6	169.5	218.9	234.9
	Weight.....	0.03954	0.04013	0.03437	0.02691	0.03070	0.02821
24	Wood, lumber, and cork						
	Index.....	100.0	81.6	112.1	268.1	315.2	231.2
	Weight.....	0.00036	0.00111	0.00077	0.00146	0.00173	0.00313
26A	Textile fibers, natural						
	Index.....	100.0	106.9	108.1	184.1	207.0	138.8
	Weight.....	0.06607	0.06159	0.09350	0.09753	0.04490	0.04388
27	Crude minerals and fertilizers						
	Index.....	100.0	109.2	105.4	116.3	139.5	164.1
	Weight.....	0.01854	0.01753	0.01462	0.01189	0.01472	0.02689
28	Metalliferous ores and scrap metal						
	Index.....	100.0	52.0	61.7	58.8	95.4	118.8
	Weight.....	0.01309	0.00824	0.00714	0.00647	0.00662	0.00626
29	Crude animal and vegetable material						
	Index.....	100.0	92.6	102.5	129.0	150.1	174.9
	Weight.....	0.06624	0.06308	0.05300	0.04475	0.04533	0.03343
32	Coal and coke						
	Index.....	100.0	113.5	110.0	125.1	170.1	206.3
	Weight.....	0.00546	0.00675	0.00316	0.00246	0.00431	0.00313
33B	Petroleum products						
	Index.....	100.0	101.1	110.0	132.8	191.8	298.6
	Weight.....	0.00237	0.00292	0.00320	0.00329	0.01047	0.01567
42	Vegetable oils and fats						
	Index.....	100.0	87.8	87.0	114.7	224.9	202.1
	Weight.....	0.01029	0.00840	0.00777	0.00633	0.01057	0.00731
43	Animal and vegetable oils and fats, processed						
	Index.....	100.0	101.0	96.1	110.0	121.0	161.5
	Weight.....	0.00026	0.00038	0.00040	0.00024	0.00030	0.00104
51	Chemical elements and compounds						
	Index.....	100.0	118.4	123.7	147.0	225.9	267.1
	Weight.....	0.01260	0.01403	0.01188	0.01347	0.01947	0.01567
53	Dyeing materials						
	Index.....	100.0	92.9	121.0	169.8	198.9	191.8
	Weight.....	0.00253	0.00251	0.00265	0.00393	0.00490	0.00313
54	Medicinal products						
	Index.....	100.0	108.5	116.7	137.1	151.8	160.1
	Weight.....	0.00549	0.00615	0.00752	0.00745	0.00834	0.01149

Table B-2

Paasche Price Indexes and Current Value Weights for PRC Exports, Excluding Crude Oil, at the Two-Digit Level of the Standard International Trade Classification (Continued)

SITC	Classification	1970	1971	1972	1973	1974	1975
55A	Essential oils						
	Index	100.0	117.2	116.7	168.1	397.0	217.4
	Weight	0.00389	0.00198	0.00192	0.00215	0.00436	0.00313
55B	Perfumery and soap						
	Index	100.0	102.2	109.8	133.1	152.7	180.9
	Weight	0.00389	0.00198	0.00192	0.00215	0.00436	0.00313
57	Explosives						
	Index	100.0	100.2	101.7	113.6	156.4	195.5
	Weight	0.00264	0.00289	0.00239	0.00232	0.00295	0.00313
58	Plastic materials						
	Index	100.0	113.9	114.3	127.2	301.0	205.0
	Weight	0.00035	0.00070	0.00080	0.00074	0.00068	0.00104
59	Chemicals, n.e.s.						
	Index	100.0	123.2	126.0	146.6	177.3	209.6
	Weight	0.02669	0.02365	0.02276	0.02259	0.02666	0.01358
61	Leather and dressed fur skins						
	Index	100.0	104.3	100.5	121.9	159.5	157.6
	Weight	0.00806	0.00875	0.01066	0.01128	0.01092	0.01044
62	Rubber manufactures						
	Index	100.0	96.2	117.2	134.6	191.7	190.2
	Weight	0.00151	0.00264	0.00199	0.00179	0.00237	0.00208
63	Wood and cork manufactures						
	Index	100.0	138.0	160.3	206.1	221.9	169.0
	Weight	0.00375	0.00409	0.00421	0.00432	0.00377	0.00417
64	Paper and paperboard						
	Index	100.0	97.2	102.1	148.8	243.0	206.1
	Weight	0.01206	0.01331	0.01204	0.01336	0.01347	0.00940
65A	Textile yarn and fabrics						
	Index	100.0	104.7	110.2	171.4	222.0	175.4
	Weight	0.11225	0.10212	0.09939	0.12495	0.10016	0.11703
65B	Textile articles blankets and rugs						
	Index	100.0	112.7	118.9	161.7	214.9	199.1
	Weight	0.04810	0.04376	0.04259	0.05355	0.04292	0.04179
66	Nonmetallic mineral manufactures						
	Index	100.0	103.9	114.9	163.1	302.8	241.6
	Weight	0.03057	0.03016	0.03582	0.03221	0.03629	0.02298
67	Iron and steel						
	Index	100.0	94.6	92.9	152.4	212.8	167.4
	Weight	0.00976	0.01912	0.01682	0.02028	0.03503	0.01358
68	Nonferrous metals						
	Index	100.0	86.0	83.2	100.4	189.2	178.6
	Weight	0.01114	0.01378	0.01275	0.01219	0.01409	0.01880

Table B-2

Paasche Price Indexes and Current Value Weights for PRC Exports, Excluding Crude Oil, at the Two-Digit Level of the Standard International Trade Classification (Continued)

STC	Classification	1970	1971	1972	1973	1974	1975
69A	Metal manufactures: industrial						
	Index.....	100.0	91.1	95.8	135.3	208.0	199.4
	Weight.....	0.00543	0.01003	0.00890	0.00868	0.00847	0.01044
69B	Metal manufactures: hand tools						
	Index.....	100.0	104.5	97.9	101.0	107.0	145.6
	Weight.....	0.00217	0.00401	0.00356	0.00347	0.00338	0.00417
69C	Metal manufactures: household products						
	Index.....	100.0	102.6	99.3	124.7	153.4	126.6
	Weight.....	0.00326	0.00602	0.00534	0.00520	0.00508	0.00626
71	Nonelectric machinery						
	Index.....	100.0	104.1	100.7	137.7	133.7	160.2
	Weight.....	0.01377	0.01835	0.01423	0.01235	0.01272	0.02507
72	Electric machinery						
	Index.....	100.0	101.9	102.9	124.2	126.1	143.3
	Weight.....	0.00826	0.00877	0.00757	0.00621	0.00793	0.01044
73	Transport equipment						
	Index.....	100.0	96.2	101.3	109.0	148.5	173.1
	Weight.....	0.00655	0.00916	0.00650	0.00749	0.00679	0.01462
81	Plumbing, heating, and lighting fixtures						
	Index.....	100.0	111.3	109.6	138.2	163.6	167.2
	Weight.....	0.00282	0.00363	0.00336	0.00290	0.00316	0.00313
82	Furniture						
	Index.....	100.0	108.1	136.9	206.8	284.6	234.2
	Weight.....	0.00422	0.00505	0.00593	0.00601	0.00565	0.00626
83	Travel goods and handbags						
	Index.....	100.0	99.4	138.7	162.4	192.3	246.1
	Weight.....	0.00427	0.00387	0.00478	0.00619	0.00519	0.00313
84	Clothing						
	Index.....	100.0	105.9	108.9	152.2	222.0	192.1
	Weight.....	0.03887	0.04107	0.04649	0.05650	0.05865	0.04911
85	Footwear						
	Index.....	100.0	105.4	113.9	130.0	170.3	171.5
	Weight.....	0.00624	0.00567	0.00714	0.00776	0.00779	0.00835
86A	Precision instruments						
	Index.....	100.0	54.3	64.9	63.3	99.9	108.2
	Weight.....	0.00125	0.00142	0.00145	0.00185	0.00168	0.00156
86B	Watches and clocks						
	Index.....	100.0	99.1	104.5	124.2	162.3	154.0
	Weight.....	0.00234	0.00238	0.00292	0.00215	0.00177	0.00156
89	Miscellaneous manufactures						
	Index.....	100.0	98.6	124.3	125.5	162.6	188.1
	Weight.....	0.03843	0.03488	0.04305	0.05576	0.04674	0.03552

Table B-3

A Sample of the Commodities Included in the Export Price Index *

Commodity No Destination	Description	1970	1971	1972	1973	1974	1975
00—Live animals	Sample size	US\$	60141160	83194969	100876514	127043698	183562075
		Percent	92.57	92.96	92.63	94.78	94.47
							91.47
00110000000 Hong Kong	Bovine cattle						
	Unit value US\$/head	48 7862	59 9008	52 3725	74 5673	149 1151	119 7688
	Unit value index	100.0	122.7	107.3	152.8	305.6	245.4
	Current value weight	0.07466	0.06268	0.06247	0.05926	0.09445	0.08633
00120200000 Hong Kong	Goats						
	Unit value US\$/head	7 2327	10 7628	11 2008	12 5193	17 4311	21 0207
	Unit value index	100.0	148.8	154.8	173.0	241.0	290.6
	Current value weight	0.00157	0.00219	0.00234	0.00202	0.00147	0.00206
00130000000 Hong Kong	Swine						
	Unit value US\$/head	31 7308	32 6249	34 0212	43 8721	63 5754	62 9571
	Unit value index	100.0	102.8	107.2	138.2	200.3	198.4
	Current value weight	0.86160	0.85932	0.84530	0.92588	0.81994	0.83579
00140100000 Hong Kong	Chicken						
	Unit value US\$/lb	0.2707	0.2894	0.3341	0.4169	0.5196	0.5281
	Unit value index	100.0	106.9	123.4	154.0	191.9	195.0
	Current value weight	0.06215	0.07579	0.08988	0.11282	0.08411	0.07580
01—Meat	Sample size	US\$	23262753	26164715	31917000	46791267	54666331
		Percent	33.05	29.82	29.77	32.15	36.83
							34.53
01130000000 Hong Kong	Pork, fresh, chilled, or frozen						
	Unit value US\$/lb	0.2311	0.2334	0.2418	0.2928	0.4964	0.4745
	Unit value index	100.0	100.9	104.6	126.6	214.7	205.2
	Current value weight	0.33325	0.23860	0.19205	0.15062	0.17176	0.14370
01140100000 Hong Kong	Chicken, fresh, chilled, or frozen						
	Unit value US\$/lb	0.2153	0.2220	0.2338	0.2997	0.4083	0.3927
	Unit value index	100.0	103.1	108.6	139.2	189.6	182.3
	Current Value weight	0.14449	0.12426	0.14529	0.13590	0.19387	0.15774
01141000000 Japan	Fowls, killed or dressed, fresh, chilled, or frozen (O.T. poultry or turkey)						
	Unit value US\$/kg	0.6647	0.6686	0.7776	1.0075	1.2080	1.0267
	Unit value index	100.0	100.5	116.9	151.5	181.7	154.4
	Current value weight	0.04127	0.10932	0.15006	0.15848	0.11137	0.09486

* A complete listing of the 528 export commodities included in the sample is available upon request

APPENDIX C

IMPORTS

Table C-1

Aggregate Price Indexes and Current Value Weights for PRC Imports, Excluding Sugar and Oilseeds

	1970	1971	1972	1973	1974	1975
Paasche price indexes (1970=100)						
Imports	100.0	92.4	92.8	120.2	162.3	189.1
Sectors of origin						
Agriculture	100.0	111.9	118.2	155.8	287.8	270.5
Extraction	100.0	75.5	76.3	141.9	215.4	141.9
Manufacturing	100.0	89.1	86.6	107.1	158.8	181.5
End use						
Foodstuffs	100.0	111.4	113.6	175.3	291.7	286.0
Industrial supplies	100.0	88.8	87.5	107.2	168.4	174.0
Capital goods	100.0	95.2	98.4	134.6	165.5	201.8
Consumer goods	100.0	94.7	124.1	148.8	153.1	204.4
Current value weights						
Imports	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
Sectors of origin						
Agriculture	0.22154	0.21767	0.27392	0.29933	0.26472	0.14988
Extraction	0.05188	0.05192	0.04617	0.06299	0.03888	0.03380
Manufacturing	0.72657	0.73040	0.67989	0.63767	0.69639	0.81631
End use						
Foodstuffs	0.16551	0.13269	0.16608	0.19077	0.19231	0.09664
Industrial supplies	0.65450	0.67751	0.67589	0.64608	0.55457	0.59998
Capital goods	0.17210	0.18111	0.14933	0.15367	0.24533	0.29745
Consumer goods	0.00787	0.00867	0.00869	0.00946	0.00777	0.00591

Table C-2

Paasche Price Indexes and Current Value Weights for PRC Imports, Excluding Sugar and Oilseeds, at the Two-Digit Level of the Standard International Trade Classification

SITC	Classification	1970	1971	1972	1973	1974	1975
04	Cereals						
	Index	100.0	111.4	113.6	175.3	291.7	286.0
	Weight	0.16551	0.13269	0.16608	0.19077	0.19231	0.09664
23A	Crude rubber, natural						
	Index	100.0	72.0	72.9	147.7	206.3	136.0
	Weight	0.04127	0.03651	0.03313	0.04664	0.02890	0.02197
23B	Crude rubber, synthetic						
	Index	100.0	85.5	86.4	123.7	230.7	219.6
	Weight	0.00403	0.00374	0.00321	0.00153	0.00162	0.00169
25	Wood pulp						
	Index	100.0	86.8	78.5	104.0	189.0	263.3
	Weight	0.00544	0.01540	0.01467	0.00806	0.00529	0.00845
26A	Textile fibers, natural						
	Index	100.0	113.8	130.2	132.2	288.6	271.9
	Weight	0.05211	0.07696	0.09753	0.09772	0.06746	0.04647
26B	Textile fibers, synthetic						
	Index	100.0	82.4	80.6	113.8	201.5	128.6
	Weight	0.00741	0.00706	0.01126	0.00964	0.01786	0.01605
27	Crude minerals and fertilizers						
	Index	100.0	101.7	112.4	122.9	563.1	595.0
	Weight	0.00590	0.00622	0.00709	0.00580	0.00280	0.00253
28	Metalliferous ores and scrap metal						
	Index	100.0	77.0	68.0	130.2	202.8	128.4
	Weight	0.00470	0.00918	0.00594	0.01054	0.00717	0.00929
29	Crude animal and vegetable material						
	Index	100.0	87.2	95.1	414.0	345.1	143.3
	Weight	0.00153	0.00083	0.00054	0.00156	0.00050	0.00169
41	Animal oils and fats						
	Index	100.0	103.9	68.0	145.7	233.5	202.5
	Weight	0.00071	0.00208	0.00167	0.00239	0.00371	0.00253
42	Vegetable oils and fats						
	Index	100.0	106.0	106.3	92.8	89.6	121.8
	Weight	0.00165	0.00509	0.00808	0.00687	0.00085	0.00253
51	Chemical elements and compounds						
	Index	100.0	88.9	92.1	124.4	262.4	287.1
	Weight	0.04986	0.05873	0.05065	0.02979	0.03100	0.04225
52	Mineral tars						
	Index	100.0	94.4	96.7	153.6	301.0	232.5
	Weight	0.00222	0.00249	0.00238	0.00175	0.00084	0.00253
53	Dyeing materials						
	Index	100.0	100.4	124.9	145.9	176.0	235.9
	Weight	0.00717	0.00606	0.00847	0.00787	0.00514	0.00422

Table C-2

Paasche Price Indexes and Current Value Weights for PRC Imports, Excluding Sugar and Oilseeds, at the Two-Digit Level of the Standard International Trade Classification
(Continued)

SITC	Classification	1970	1971	1972	1973	1974	1975
54	Medicinal products						
	Index	100.0	101.2	133.6	189.0	293.7	413.1
	Weight	0.00129	0.00146	0.00167	0.00109	0.00051	0.00169
55B	Perfumery and soap						
	Index	100.0	102.1	105.0	133.5	161.0	208.4
	Weight	0.00097	0.00209	0.00207	0.00188	0.00132	0.00084
56	Fertilizers, manufactured						
	Index	100.0	91.2	92.5	126.0	196.7	378.7
	Weight	0.08245	0.08154	0.07368	0.04898	0.03409	0.06084
58	Plastic materials						
	Index	100.0	78.0	77.6	116.5	238.7	145.7
	Weight	0.01701	0.01240	0.01897	0.01343	0.02243	0.01183
59	Chemicals, n.e.s.						
	Index	100.0	144.6	45.6	113.2	82.4	172.5
	Weight	0.00889	0.00996	0.00954	0.00703	0.00336	0.00422
62	Rubber manufactures						
	Index	100.0	86.4	88.4	115.7	76.9	175.4
	Weight	0.00129	0.00027	0.00074	0.00029	0.00041	0.00084
64	Paper and paperboard						
	Index	100.0	83.1	91.7	133.9	242.2	262.7
	Weight	0.00815	0.00573	0.01160	0.00926	0.01744	0.01267
65A	Textile yarn and fabrics						
	Index	100.0	91.8	91.6	122.1	183.7	162.3
	Weight	0.02370	0.02218	0.02517	0.01759	0.03059	0.01352
66	Nonmetallic mineral manufactures						
	Index	100.0	91.4	61.1	69.2	80.5	86.0
	Weight	0.01343	0.00984	0.00701	0.00434	0.00154	0.00253
67	Iron and steel						
	Index	100.0	93.2	94.4	121.3	169.5	193.3
	Weight	0.22147	0.26622	0.24088	0.24289	0.21400	0.23914
68	Nonferrous metals						
	Index	100.0	49.5	43.6	49.2	68.5	81.5
	Weight	0.08590	0.03366	0.03796	0.06897	0.04709	0.07182
69A	Metal manufactures: industrial						
	Index	100.0	94.9	97.1	131.6	182.9	196.2
	Weight	0.00808	0.00528	0.00561	0.00304	0.01053	0.02028
69B	Metal manufactures: hand tools						
	Index	100.0	80.8	84.4	96.2	138.2	174.8
	Weight	0.00292	0.00217	0.00195	0.00152	0.00429	0.00084
71	Nonelectric machinery						
	Index	100.0	99.1	110.4	125.9	162.1	213.3
	Weight	0.07938	0.09854	0.06498	0.05511	0.09919	0.15295

Table C-2

Paasche Price Indexes and Current Value Weights for PRC Imports, Excluding Sugar and Oilseeds, at the Two-Digit Level of the Standard International Trade Classification
(Continued)

SITC	Classification	1970	1971	1972	1973	1974	1975
72	Electric machinery						
	Index	100.0	101.9	82.1	136.6	176.0	198.1
	Weight	0.01007	0.00826	0.01310	0.01318	0.01817	0.03042
73	Transport equipment						
	Index	100.0	90.4	91.4	141.0	167.0	185.6
	Weight	0.07132	0.06795	0.06460	0.07856	0.11822	0.10647
86A	Precision instruments						
	Index	100.0	86.7	115.6	154.6	194.3	272.2
	Weight	0.00839	0.00416	0.00467	0.00527	0.00544	0.00676
86B	Watches and clocks						
	Index	100.0	65.4	180.3	166.3	171.8	165.5
	Weight	0.00350	0.00312	0.00350	0.00500	0.00343	0.00253
89	Miscellaneous manufactures						
	Index	100.0	101.6	78.6	108.9	120.0	154.1
	Weight	0.00210	0.00198	0.00144	0.00147	0.00249	0.00084

Table C-3

A Sample of the Commodities Included in the Import Price Index*

Commodity No Origin	Description	1970	1971	1972	1973	1974	1975
04—Cereals							
	Sample size US\$	256294523	196837057	286044042	654815590	974244132	523671222
	Percent	100.00	100.00	100.00	99.99	100.00	91.57
041006164690 Canada	Red spring wheat, except seed						
	Unit value US\$/cwt	2.6206	2.8652	2.8335	3.5669	8.7218	7.1209
	Unit value index	100.0	109.3	108.1	136.1	332.8	271.7
	Current value weight	0.44510	0.87088	0.71084	0.27796	0.34333	0.55875
041900000000 Other	Wheat, unmilled, O.T. Canadian red spring wheat, imported from Australia, Argentina, Canada, France, and the United States						
	Unit value US\$/mt	47.6105	62.1805	61.5416	94.0873	138.6891	147.1932
	Unit value index	100.0	130.6	129.2	197.6	291.2	309.1
	Current value weight	0.55251	0.9704	0.20615	0.50294	0.49263	0.41477
044000000000 Other	Corn, unmilled, imported from Argentina and the United States						
	Unit value US\$/mt	48.0920	58.9911	63.1352	94.4446	111.8406	130.0000
	Unit value index	100.0	122.6	131.2	196.3	232.5	270.3
	Current value weight	0.00238	0.03207	0.08299	0.21909	0.16402	0.02646
23A—Crude rubber, natural							
	Sample size US\$	19146831	13278446	15634127	27708873	28971665	24903768
	Percent	29.95	24.51	27.39	17.30	19.78	19.15
231101000000A Singapore	Rubber, ribbed, smoked, sheet						
	Unit value US\$/mt	426.1290	307.2292	310.8176	629.7471	879.2614	579.8181
	Unit value index	100.0	72.0	72.9	147.7	206.3	136.0
	Current value weight	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
23B—Crude rubber, synthetic							
	Sample size US\$	6238343	5461917	3759090	4758156	7919808	8179189
	Percent	99.76	98.44	67.91	90.28	96.21	81.79
231220000000B Japan	Styrene-butadiene rubber						
	Unit value US\$/kg	0.2369	0.2028	0.2097	0.3073	0.6565	0.4576
	Unit value index	100.0	85.6	88.5	129.7	277.1	193.1
	Current value weight	0.53494	0.61992	0.56561	0.28745	0.58337	0.56163
231230000000B Japan	Synthetic rubber, n.e.s. (O.T. latex)						
	Unit value US\$/kg	0.3535	0.2922	0.2857	0.4547	0.7334	0.9417
	Unit value index	100.0	82.6	80.8	128.6	207.4	266.3
	Current value weight	0.46505	0.38007	0.43438	0.71254	0.41662	0.43836
25—Wood pulp							
	Sample size US\$	1642117	6070992	2700947	9163081	4586887	2505416
	Percent	19.47	26.56	10.68	33.08	17.40	5.01

*A complete listing of the 192 import commodities included in the sample is available upon request.

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